

## **1080 review submission - Additions 22 May 2007**

**From Rod McDonald, ID 9060**

### **Recap:**

I submitted that the public's primary problem with 1080 is not the 1080, but the air-drop.

Air-dropped poisons are inherently somewhat indiscriminate, even when skilfully applied. Non-target animals can access pellets that fall on the ground; and 1080 enters the environment in quantities far greater than required to kill the target animals.

Whether or not these issues are serious is not my case – the important thing is that a large portion of the public perceives that the issues are serious. As Dr Hood has said, our aim should be to separate 1080 from humans as far as possible.

In my formal submission I described a new automated bait station with always-fresh baits, which releases only a tiny quantity of 1080, dispensing it only to target animals. It has very low operational costs even in difficult-access country, because it is designed to operate without attention for up to five years. It has potential to address concerns about by-catch, water contamination and the high cost of ground control.

My point was that if 1080 is to be further controlled, it should be controlled in a manner that would allow its use in new ways that address public objections.

### **Update:**

Now I want to update that description with the results of a trial, which illustrates how a different means of use might affect acceptability.

In May 2006, near Taupo, we set out 20 of our "Scentinel" automated bait stations over 25 square km. Our target species was ferrets, for the Animal Health Board. We had one unit per 125 hectares - ferret trapping is normally carried out with about one trap per 10 hectares.

Before we started, professionals trapped and radio-collared as many ferrets as they could find in the area, using fresh-meat baits and best practice. By the time they had finished we were tracking 23 in our area. The Scentinels killed 10 of them in 5 weeks.

Then the professionals returned to do a thorough "clean-out". They were able to catch only two of the remaining 13 ferrets known to be still alive in the area.

So it seems we were dealing with a population that was by that time practically untrappable. This may have been due to the onset of winter or to the prior handling. Under the circumstances our killing ten might be regarded as promising.

- This was only the first trial in what we hope will be a series. But we can already ask, what would have happened if we had deployed our bait stations without prior trapping and collaring, and had the stations on the ground all year round as they are designed to function? We don't know yet, but if a few reasonable

assumptions went our way, and the devices achieved anywhere near the planned life, we might have been achieving excellent control of ferrets for a dollar or two per hectare per year.

- The trappers spent 36 person-days catching the ferrets first time round. We in principle would have required only two person-days over several years.
- We confirmed from in-tunnel cameras that non-target animals, either larger or smaller than the target size, have little chance of accessing the poison.
- Even secondary kills should be rare, because target animals receive only a single dose of poison, and so do not carry any higher levels of 1080 in their bodies than necessary.
- The quantity of 1080 dispensed was 0.05mg/ha. In contrast, a typical 1080 airdrop operation would dispense about 100,000 times that quantity per hectare. The ratio would be less favourable if we were targeting rats, for example, but the margin should still be very large.

If "the dose makes the poison" then a quantity of poison that is thousands of times lower than standard should make a difference to public acceptance.

In considering restrictions on 1080, we should not throw the baby out with the air-dropped bathwater.

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The Scentinel has been developed as a joint HortResearch / University of Waikato project, with the help of FRST, Environment Waikato, the Animal Health Board and others. It is currently being commercialised. For further information see [www.scentinel.co.nz](http://www.scentinel.co.nz)